

PAIN MANAGEMENT KIT FOR ADMINISTRATION OF MEDICATION

RELATED APPLICATIONS

[0001] This application is related to, and claims priority from, U.S. Provisional Patent Application No. 60/283,800, filed Apr. 13, 2001, the entirety of which is hereby incorporated by reference.

BACKGROUND OF THE INVENTION

[0002] 1. Field of the Invention

[0003] This invention relates to pain management systems, and more specifically to a catheter-based infusion system for the administration of fluids. Most specifically, this invention relates to a pain management kit for performing a nerve block procedure.

[0004] 2. Description of the Related Art

[0005] Prior to performing a surgical operation on a part of the body, such as for example the arms or legs, it may be desirable to perform a nerve block in order to anesthetize a nerve bundle in a part of the body proximate to where surgery will occur. Often, a catheter-based infusion system is utilized to both block the nerve bundle for surgery and to provide a continuous, low flow rate of the anesthetic over a period of time (e.g., 2-3 days following surgery) for post-operative pain management.

[0006] One approach is to use an epidural needle having an integral conductive wire such that a small amount of current may be pulsed through the needle by a nerve stimulator (i.e., a current generator). When the epidural needle is probed into the general area of the desired nerve bundle, the pulsing current stimulates the nerve and causes a motor response to assist in properly locating the needle. Once proper location of the needle is achieved, a test dose of the anesthetic may be provided through the epidural needle. Proper positioning of the needle is verified by a failure to obtain a motor response to the current stimulation. At this point, a catheter may be introduced through the needle to administer the anesthetic and maintain the nerve block.

[0007] The above-described procedure is typically performed by an anesthesiologist in a prep room outside of the operating room (OR) because a period of time is necessary for the nerve block to become effective and because time in the OR is at a premium. This procedure is often very time consuming and inefficient due to the volume of medical supplies and items that must be obtained, opened and arranged in order to perform the nerve block.

[0008] First, the anesthesiologist must set up a sterile field around the desired pierce site. To do this, one or more packages containing the necessary supplies, such as a drape, iodine solution and prep sticks to apply the iodine solution, must be obtained and opened. Next, the epidural needle, infusion pump, infusion supplies (tubing, clamps, connectors, flow meter, filter, etc.), catheter and anesthetic, which are typically packaged separately, must be obtained and prepared. Additional medical supplies, such as a local anesthetic, needles and syringes are also necessary to numb the desired pierce site. These products are also likely to be packaged separately from each other, as well as from the supplies listed above.

[0009] The collection, opening and preparation of the above-listed medical supplies is time consuming and one or more items may be misplaced or forgotten. In addition, a large amount of waste is generated from the separately packaged items. Therefore, a need exists for an improved system of providing the primary medical supplies necessary to perform a continuous nerve block in a sterile and efficient manner.

SUMMARY OF THE INVENTION

[0010] One aspect of the present invention provides a pain management kit containing the primary supplies necessary to perform a continuous peripheral nerve block in a single, sterile container which may be easily stored and transported. Advantageously, the pain management kit is easy to open and its contents are arranged such that the items may be retrieved from the kit generally in the order of their subsequent use in the nerve block procedure.

[0011] Briefly stated, the pain management kit provides supplies necessary to create a sterile field, locally anesthetize the desired pierce site and perform the nerve block in a single, sterile container. Generally, the only additional supplies required are a nerve stimulator, an infusion pump, and the desired infusion drug. The nerve stimulator is an electronic device that is non-sterile and reusable, therefore it is not desirable to package it with the pain management kit. Likewise, the infusion pump may be an electronic device, but is preferably a mechanical pump. The infusion pump may also be reused, but, if of a typical mechanical variety, is inexpensive enough to be discharged with the patient. Because the infusion pump is reusable, and not required to be sterile, it is also desirably not included with the kit. Additionally, the choice of anesthetic drug may vary by doctor preference and/or patient need. Therefore, the drug is advantageously omitted from the pain management kit.

[0012] One embodiment provides a pain management kit with a plurality of medical items secured within a container configured such that the medical items remain sterile at least until the container is opened. The medical items include sterile field supplies, local anesthetic supplies and continuous nerve block supplies.

[0013] For purposes of summarizing the invention and the advantages achieved over the prior art, certain objects and advantages of the invention have been described hereinabove. Of course, it is to be understood that not necessarily all such objects or advantages may be achieved in accordance with any particular embodiment of the invention. Thus, for example, those skilled in the art will recognize that the invention may be embodied or carried out in a manner that achieves or optimizes one advantage or group of advantages as taught herein without necessarily achieving other objects or advantages as may be taught or suggested herein.

[0014] All of these embodiments are intended to be within the scope of the invention herein disclosed. These and other embodiments of the present invention will become readily apparent to those skilled in the art from the following detailed description of the preferred embodiments having reference to the attached figures, the invention not being limited to any particular preferred embodiment(s) disclosed.

[0015] Further aspects, features and advantages of the present invention will become apparent from the following